



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,270	10/14/2003	Thomas L. Mikes	10004278-1	4933

7590 08/24/2005

Agilent Technologies, Inc.
Legal Department, DL 429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

HUGHES, JAMES P

ART UNIT PAPER NUMBER

2883

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/685,270	Applicant(s) MIKES ET AL.	
	Examiner James P. Hughes	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on March 21, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 21, 2005 have been fully considered but they are not persuasive.

Regarding claims 1-7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning rather than a motivation to combine (see e.g., page 2-4), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that the Office Action fails to provide a sufficient motivation for combining the Dragone and Xiang because Xiang teaches a spectrometer that “disperses spectra from an “image of a scene.” ... For example, the concentric spectrometer may be employed with a telescope so that an “image” from a distant object, such as a celestial body, can be better analyzed. ... Such “images”, unlike the optical data “signals” of Dragone, do not usually convey digital data and are not typically transmitted through optical fibers.” (See pages 3-4 of the amendment) This is not persuasive because the concentric spectrometer of Xiang may receive an optical signal (comprising multi-wavelength component light) and demultiplex said signal into its competent spectra – or individual wavelengths. Xiang teaches that a concentric spectrometer may efficiently reduce crosstalk (resolution) between the constituent wavelength components.

Art Unit: 2883

As is commonly known in the art and acknowledged by Dragone, suppressing the inter-signal crosstalk from the constituent component signals is advantageous (see e.g., Col. 1, ll. 15-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an efficient multiplexing device, such as a concentric spectrometer taught by Xiang. Following, one of ordinary skill in the art would have been motivated to do so to yield an efficient device as discussed above and in the rejection below.

Regarding claims 8 and 9. Applicant argues that Xian teaches away from the claimed invention because Xiang does not explicitly teach the multiplexing of signals. (See p. 6 of the amendment) This argument is not persuasive because as stated in the previous Office Action "Dragone discusses (See e.g., Col. 1, ll. 14 – 55) it is well known in the art that the same device may multiplex and demultiplex optical signals." (See the top of page 3 of the Office Action) Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a concentric spectrometer, such as the one taught by Xiang, in a multiplexing/demultiplexing device as taught, for example, by Dragone for the reasons stated above and in the rejection below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2883

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dragone et al. (6,263,127) in view of Xiang et al. (6,266,140). Dragone et al. (6,263,127), wherein after referred to as “Dragone”, teaches a free-space multiplexer and demultiplexer wherein multi-wavelength component light enters a free-space multiplexer and demultiplexer – which could also be considered a spectrometer – via an input optical fiber interface (e.g., 102) interface. Within the spectrometer, the light is reflected off of a diffraction grating (e.g., 501) that spectrally separates the multi-wavelength light into its constituent wavelength component signals. Following, constituent wavelength component signals are directed to a plurality of output fibers (e.g., 502 – 505). (See e.g., Col. 3, ll. 35 – Col. 4, ll. 60; Figs. 4 and 5) Additionally, as Dragone discusses (See e.g., Col. 1, ll. 14 – 55) it is well known in the art that the same device may multiplex and demultiplex optical signals.

However, Dragone does not explicitly teach that the free-space multiplexer and demultiplexer comprises a concentric spectrometer.

Xiang et al. (6,266,140), herein after referred to as “Xiang” teaches an aberration correcting concentric spectrometer wherein multi-wavelength component light is reflected from a mirror (30) onto an aberration corrected diffraction grating (100) that spectrally separates the multi-wavelength light into its constituent wavelength component signals. Following, the individual channels are reflected from a concave mirror (40) and directed to an output device (50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an efficient multiplexing device, such as a concentric spectrometer taught by Xiang, in a multiplexing/demultiplexing device such as the one taught by Dragone. One of ordinary skill

Art Unit: 2883

in the art at the time of the invention would have been motivated to incorporate an aberration corrected concentric spectrometer such as taught by Xiang, into the multiplexer and demultiplexer of Dragone; because Xiang teaches that an aberration corrected concentric spectrometer may reduce the crosstalk (resolution) between the constituent wavelength component signals of a demultiplexer (See e.g., Col. 1, ll. 15-45) and as Dragone acknowledges, suppressing the inter-signal crosstalk from the constituent wavelength component signals is advantageous (See e.g., Col 1, ll. 15-25).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2883

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James P. Hughes whose telephone number is 571-272-2474. The examiner can normally be reached on Monday - Friday 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James P. Hughes
Patent Examiner
Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800